



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Diab et al.) Group Art Unit 3736
 Appl. No. : 08/943,511)
 Filed : October 6, 1997)
 For : SIGNAL PROCESSING)
 APPARATUS)
 Examiner : Unknown)
 _____)

Preliminary Amendment

Assistant Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

Prior to Examination on the merits, please add the following new claims.

In The Claims:

Please cancel Claims 19-34, 37 and 38. Please add the following new Claims 39-50.

39. A pulse oximeter comprising:

an input configured to receive at least two measured intensity signals generated by the detection of multiple wavelengths of light transmitted through body tissue, said intensity signals each having a portion substantially dependent upon arterial blood oxygen saturation;

a Kalman filter that calculates an estimate of a physiological signal related to at least one of said intensity signals, and

a processor that tracks said portions in the presence of motion based upon said estimate to derive an oxygen saturation value.